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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,784	12/17/2001	John Henry May	UDL 2 0018	7085

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EXAMINER

RIVELL, JOHN A

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 10/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,784

Applicant(s)

MAY, JOHN HENRY

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/17/01(app), 3/22/02(IDS,priority).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 12, 13, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 6-9 and 14-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

By preliminary amendment filed concurrently with the application, claim 11 has been canceled. New claims 12-20 have been added. Thus claims 1-10 and 12-20 are pending.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "housing in which the body member can be mounted..." as recited in claims 10, 18 and 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are further objected to as set forth on the attached Draftsperson's Review PTO-948. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 10, 12, 13, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorchev et al. in view of Friedrich.

The patent to Gorchev et al. discloses "a flow control valve (generally in figure 1) including a body member (at the inlet element labeled 14 but referred to as 17 at column 3, lines 3-10) having a bore (initiating at 16.2) defining a fluid flow passageway

(16.2), a resiliently-biassed (spring 36) piston member (valve head 20) mounted in said passageway (16.2) for movement relative to the body member in response to the differential fluid pressure across the valve, said piston member (at the widest portion P") defining an annular throttling orifice between said piston member (20) and said bore (16.2), wherein at least a portion of said passageway has a non-uniform cross-section, such that the size of the annular orifice depends on the position of the piston member relative to the body member; characterised in that the piston member has a side wall... wherein... the cross-sectional area of said... depend on the position of the piston member relative to the body member" as claimed in claim 1.

Thus Gorchev et al. discloses all the claimed features with the exception of having "a piston member (having) a side wall that defines with the non-uniform portion of the flow passageway an annular fluid flow slot (whose) length and cross sectional area depend on the position of the piston member relative to the body member".

The patent to Friedrich discloses that it is known in the art to employ a cylindrical piston "A" having a "side wall" which, in combination with a wall of a bore within body member "B", defines an "annular fluid flow slot" whose length depends on the position of the piston "A" relative to the body member "B" for the purpose of providing flow regulation which maintains a constant pressure by increasing a length of the slot as the pressure drop across the valve increases (see figure 1 of Gorchev et al. in which the inlet is at the bottom and the outlet is at the top).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Gorchev et al. a cylindrical piston member replacing the conical shaped member therein for the purpose of providing flow regulation which maintains a constant pressure by increasing a length of the slot as the

pressure drop across the valve increases, as well as the cross sectional shape of the "slot" as in Gorchev et al. as recognized by Friedrich.

Regarding claim 2 in Gorchev et al., "the non-uniform portion of the fluid flow passageway increases in size towards an inlet end of said passageway" as claimed.

Regarding claim 3, in Gorchev et al., "the non-uniform portion of the fluid flow passageway is flared" at the inlet portion at 1 arrow 16.2 as claimed.

Regarding claims 4, 12 and 13, in Gorchev et al., "said piston member includes a piston head, and said throttling aperture is defined between a downstream edge of said piston head (at the widest portion of the head of Gorchev et al. and of Friedrich) and said non-uniform portion of the fluid flow passageway" as claimed.

Regarding claim 5, "the piston head (of Friedrich) is substantially cylindrical" as claimed.

Regarding claims 10, 18 and 19, both Gorchev et al. and Friedrich disclose a "housing (16 and the outer unnumbered casing, respectively) in which the body member (at the inlet element labeled 14 but referred to as 17 at column 3, lines 3-10, "B", respectively) can be mounted, wherein said housing is capable of accommodating interchangeable flow control valve cartridges having different fluid flow capacities" as claimed.

Regarding claim 20, the explanation regarding claim 1 applies here as well.

Claims 6-9 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

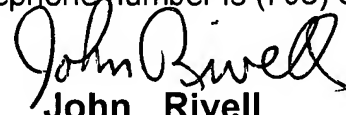
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3753

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (703) 308-2599. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



John Rivell
Primary Examiner
Art Unit 3753

j.r.